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PUBLICATION No. 399

UNIVERSITY OF MASSACHUSETTS



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University of Massachusetts
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AMHERST, MASSACHUSETTS
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May, 1963

CHANGES IN YOUNGER POPULATION OF MASSACHUSETTS 1950 - 1960

Thomas O. Wilkinson
Associate Professor of Sociology
Department of Sociology
and Anthropology

NOTE ON SOURCES:

All the demographic data contained in this report were compiled from the following United States Bureau of the Census publications:

- U. S. Census of Population: 1960. General Population Characteristics, United States Summary PC (1) 1B U.S.
- U. S. Census of Population: 1960. Number of Inhabitants, Massachusetts. PC (1) 23A, Mass.
- U. S. Census of Population: 1960. General Population Characteristics, Massachusetts. PC (1) 23B, Mass.
- U. S. Census of Population: 1950. Vol. II. Characteristics, of Population, Part 21, Massachusetts.

CONTENTS

	Page
Introduction	3
I. The Younger Age Group: A Comparison with the United States, 1950-1960	5
II. The Younger Age Groups: A Comparison by Counties for Massachusetts, 1950-1960	6
III. The Younger Age Groups: A Comparison by Counties of Rural Population, Massachusetts, 1950-1960	10
Appendix	11

CHANGES IN MASSACHUSETTS POPULATION FIVE TO TWENTY YEARS OF AGE 1950-1960

Thomas O. Wilkinson
Massachusetts Population Research Institute
Massachusetts Experiment Station
University of Massachusetts

Introduction

The segment of a population which falls in ages under 20 years represents in essence the basic demographic potential of that population. It is in this segment that the major educational burden lies, this population forms the pool principally from which future labor force will be drawn; studies have shown that the greater portion of inter-state migrations occur soon after the 20th year — further illustrations of the overall significance of this population segment are unnecessary to justify a concern for those in these age groups.

In addition to the broad importance of those under 20 years of age to a population, many specific and specialized programs draw their clientele from this age segment. Among these is the 4-H program. This report is based upon an analysis of the population within Massachusetts which falls within the ages 5 and 20 years — the age segment which encompasses the vast majority of those active or potentially active in the 4-H program. The increases and decreases and the redistribution of those in this age group is of crucial concern to those administering 4-H activities. Our primary purpose here is to delineate these changes for the state as a whole and for its component counties. Basically, we are concerned with answering such questions as: Within the 1950-60 year period, has the younger age segment of Massachusetts population kept pace with the total population? Within the state, how have the younger segments of county populations changed during the past decade?

The analysis is organized as follows:

- I. The Younger Age Groups: A Comparison of Massachusetts with the United States, 1950-1960.
The purpose in this introductory passage is to place the State of Massachusetts in the context of the nation with respect to the 5-20 years of age segment. Comparisons are made for U. S. and Massachusetts totals and for U. S. and Massachusetts rural areas.
- II. The Younger Age Groups: A Comparison by Counties for Massachusetts, 1950-1960.
Each county is presented, first, as it contrasts with the total state and then with each of the other counties.
- III. The Younger Age Groups: A Comparison by Counties of Rural Population for Massachusetts, 1950-1960.
Distribution of and changes for 1950-60 in the younger age groups are presented for the census defined rural population by counties.

Table 1

**Number and Percentage of Total Population 5-20 Years of Age for
United States and Massachusetts, 1950-1960**

	MASSACHUSETTS						TOTAL UNITED STATES					
	1960			1950			1960			1950		
	Male Number	Female Number	%	Male Number	Female Number	%	Male Number	Female Number	%	Male Number	Female Number	%
Total Pop.	5,148,578	4,690,514		179,323,175	151,325,798							
5-9 yrs.	248,916	238,989	4.6	186,744	178,009	3.8	9,504,368	9,187,412	5.1	6,746,578	6,515,555	4.3
10-14 yrs.	226,583	217,888	4.2	150,672	144,835	3.1	8,524,289	8,249,203	4.6	5,684,922	5,482,556	3.6
15-19 yrs.	178,500	183,438	3.6	151,474	157,032	3.2	6,633,661	6,585,582	3.7	5,342,290	5,329,031	3.5

Table 3

**Number and Percentage of Rural Population 5-20 Years of Age for
United States and Massachusetts, 1950-1960**

	MASSACHUSETTS						UNITED STATES					
	1960			1950			1960			1950		
	Male Number	Female Number	%	Male Number	Female Number	%	Male Number	Female Number	%	Male Number	Female Number	%
Total	846,048	731,275		54,054,425	54,478,981							
Rural Pop.												
5-9 yrs.	48,456	45,186	5.3	34,070	31,385	4.3	3,113,861	2,969,294	5.5	2,911,628	2,777,715	5.1
10-14 yrs.	41,586	39,015	4.6	27,044	24,773	3.4	2,946,037	2,779,940	5.1	2,610,897	2,455,774	4.5
15-19 yrs.	30,991	27,198	3.2	25,036	23,314	3.2	2,396,982	2,090,567	3.9	2,371,491	2,094,448	3.8

The Younger Age Groups: A Comparison of Massachusetts with the United States, 1950-1960

The post-World War II increases in births throughout the United States gave to every area an increase in the younger age groups. Massachusetts was no exception to this trend. Table 1 shows the number and percentage of total population in the three age groups under 20 (5-9 years, 10-14 years, and 15-19 years) for total U. S. and for Massachusetts for 1950 and 1960. It is to be noted that the proportion of population in these ages increased for both U. S. and Massachusetts in every age group and in both sexes. However, the proportions for Massachusetts in each age group and sex are below those for the United States for both 1950 and 1960. This is to say that Massachusetts for both census years has had relatively fewer population in the younger ages than the United States as a whole. It can be noted further that though Massachusetts is below the United States in relative proportions of the younger aged, the gap tended to close somewhat during the decade 1950-1960. In 1960, the Massachusetts proportions in the three younger age groups were closer to the proportions of the United States as a whole than they were in 1950. This can be shown by forming ratios of the per cent in each age group for Massachusetts over the per cent in that age group in the United States for each census year:

$$\frac{\% \text{ Males Aged 5-9 for Mass. 1950}}{\% \text{ Males Aged 5-9 for U. S. 1950}} \times 100 = \frac{4.0}{4.5} \times 100 = 88.9$$

If these calculations are done for each census year and each age and sex group, the following comparisons result:

Table 2

Massachusetts-United States Comparisons of Total Younger Age Structure, 1950-60

Age Group	Males		Females		
	1950	1960	1950	1960	
5-9	88.9	90.6	88.4	90.2	Average number of ratio points changed = +3.7
10-14	84.2	91.7	86.1	91.3	
15-19	91.4	94.6	94.3	97.3	

In each case the ratio is higher in 1960 than it was in 1950. The conclusions we can draw might be put in this form: The United States and Massachusetts increased in proportion of those aged 5-20 years of age from 1950 to 1960. In both census years the Massachusetts proportions were less than those for the United States, but the differential tended toward decrease during the past decade.

If we turn now to the rural¹ segment of the population, we find much the same set of relationships, but for both the United States and Massachusetts the proportions of population in the younger ages are higher.

Again, we note that Massachusetts follows the general trend of proportional increase present in total United States. If we use the same comparative technique for the rural population as for the total (Table 2, above), we see that the relative gains by Massachusetts as against total United States in the younger ages of the rural segment are significantly higher.

¹The term "rural" here refers to all population outside administratively defined cities. That is, both rural-nonfarm and rural-farm population are combined in the rural category. We follow the census in the use of the term rural here, but it is likely that *non-urban* would be a more precise designation.

Table 4
Massachusetts-United States Comparisons of Rural
Younger Age Structure, 1950-60

Age Group	Males		Females		
	1950	1960	1950	1960	
5-9	88.7	98.3	84.3	96.4	Average number of ratio points changed = +8.8
10-14	77.1	89.1	75.6	90.2	
15-19	77.3	84.1	84.2	82.1	

In the rural population each Massachusetts age and sex group increased proportionately relative to the United States with the exception of the females 15-19 years of age. Even recognizing this decrease of 2.1 ratio points, the average point increase for the total rural population is 8.8 as compared to 3.7 for the total population. Our conclusion is that, though in both total and rural population Massachusetts is proportionally below the United States in the younger ages, during the decade 1950-1960, the gap was closing and further that the rural differentials were closing more rapidly than for the total.

II

The Younger Age Groups: A Comparison by Counties for Massachusetts, 1950-1960

We begin our county comparisons by asking the question where are the younger aged population in the State? Table 5 shows the distribution of Massachusetts population aged 5-20 years by county, both in absolute numbers and percentages. As a means of comparison, Table 5 shows also the distribution of total population for the State.

The county distribution of the younger aged in essence is the same as that for the total population by counties. The only indication of differentials is the lower proportion of young in the intensely urban counties: Suffolk County (Boston) is totally urban and there is a 1.4 percentage point greater per cent of total population than per cent young aged in the county.

Table 5
County Distribution of Younger Aged Population and
Total Population of Massachusetts, 1960

County	Younger Age Groups 5-19 yrs. of age	% of Mass. Total	Total Population	
			Number	% of Mass. Total
Total	1,294,314	100.0%	5,148,578	100.0%
Barnstable	16,623	1.3	70,286	1.1
Berkshire	36,396	2.8	142,135	2.8
Bristol	100,273	7.7	398,488	7.7
Dukes	1,407	0.1	5,829	0.1
Essex	142,371	11.0	568,831	11.0
Franklin	14,572	1.1	54,864	1.1
Hampden	108,976	8.4	429,353	8.3
Hampshire	28,522	2.2	103,229	2.0
Middlesex	313,886	24.3	1,238,742	24.1
Nantucket	767	0.1	3,559	0.1
Norfolk	135,357	10.5	510,256	9.9
Plymouth	65,666	5.1	248,449	4.8
Suffolk	180,693	14.0	791,329	15.4
Worcester	148,805	11.5	583,228	11.3

We move now to a consideration of the 1950-60 changes in age structure within Massachusetts. As a general background to this consideration of change, we note first that the total population of the United States 1950-60 changed

18.5%, while Massachusetts gained 9.8% in total population. Both for Massachusetts and the United States as a whole, however, the rates of growth in the younger ages were significantly higher (Table 6).

Table 6

Changes in the Younger Ages, Massachusetts and United States, 1950-60								
Age Groups	Mass. Population Increases				U. S. Population Increases			
	Males		Females		Males		Females	
	Number	%	Number	%	Number	%	Number	%
5-9	62,172	33.3	60,980	34.3	2,757,800	40.9	2,671,857	41.0
10-14	75,911	50.4	73,053	50.4	2,839,367	49.9	2,766,647	50.5
15-19	27,026	17.8	26,406	16.8	1,291,371	24.2	1,256,551	23.6

Table 6 indicates that though the rate of total increase for Massachusetts was approximately one-half that of the United States, in the younger age groups the Massachusetts-United States percentages are rather similar. In no case, does the Massachusetts vs. United States comparison approach the one-half level found in the total population change.

Turning now to county comparisons of rates of change, we note that in every county where there was a total population increase (with the exception of the two island counties, Dukes and Nantucket), there were trends of increase higher for each younger age group than for the rate of total population change (Table 7).

The exceptions to the general trend of higher rates of increase for younger ages are as follows:

- (1) Berkshire County: Here both males and females in the 15-19 years of age group increased but at a lower rate than the total population. Berkshire County is an area of out-migration. The population which has completed its secondary education and is moving toward entrance in the labor force is that population segment most prone to migrate — and this would appear to be the movement now in progress in Berkshire County.
- (2) Nantucket and Dukes Counties: Both these counties contain relatively small total populations (for example, the males in ages 5-9 in Dukes County increased only 14 from 1950 to 1960; the total in this age group was only 273 in 1960). Percentage changes here are, therefore, unreliable bases for broad generalizations. It does appear clear, however, that a general trend of out-migration as population reaches the 15-19 years of age group is characteristic of Nantucket and Dukes Counties.
- (3) Suffolk County (Boston): The pattern of change here is significantly different from those of (1) and (2) above. Suffolk County is almost totally composed of Boston City. The loss of total population of 11.7% from 1950 to 1960 is a reflection of suburbanization around Boston rather than genuine out-migration from the area. Much of the gain in Barnstable County, for example, is the result of Boston City's population moving to suburban areas. Losses in the 5-9 years of age group for Suffolk County reflect the movement of married couples still in the reproductive ages with their children to suburban areas.

The county changes so far discussed are summarized graphically in Figure 1. Again, the exceptions discussed above stand out clearly in this type of comparison.

Table 7
Changes in Age Structure by Counties in Massachusetts, 1950-60
Change in Younger Ages

County	Total Pop. % Change	5-9 years of age				10-14 years of age				15-19 years of age			
		Male		Female		Male		Female		Male		Female	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Barnstable	50.2	1515	79.7	1418	77.2	1329	88.0	1292	85.2	708	44.7	668	49.4
Berkshire	6.9	1919	35.8	1713	33.2	2060	44.9	1940	45.4	292	6.4	282	6.6
Bristol	4.4	2733	17.3	2537	16.7	5564	44.5	5566	45.7	1870	15.9	1902	15.0
Dukes	3.5	14	5.4	-11	-4.5	35	17.1	86	47.5	28	14.4	-11	-6.0
Essex	8.9	7237	35.1	7119	36.3	9215	55.5	9010	57.6	2688	17.6	2708	16.2
Franklin	4.0	584	25.6	782	37.3	823	43.7	874	51.5	165	10.5	83	4.8
Hampden	16.7	7497	52.3	7337	53.1	8724	80.1	7912	74.2	2633	24.2	3294	30.0
Hampshire	17.8	1587	50.6	1565	52.7	1831	73.4	1858	78.0	1807	62.1	1534	34.5
Middlesex	16.4	18803	44.2	18475	45.9	19288	55.1	18825	56.4	8005	21.8	5843	15.9
Nantucket	2.2	22	18.0	34	27.9	-2	-1.5	45	43.7	-18	-14.5	-36	-30.8
Norfolk	30.1	10338	62.1	9984	63.4	11035	86.1	10553	86.2	5036	41.2	4983	36.3
Plymouth	31.1	4657	55.8	4470	55.8	5690	90.5	5287	88.1	2687	47.7	2863	49.9
Suffolk	-11.7	-1411	-4.2	962	-3.0	1721	6.2	1984	7.3	-1370	-4.6	-582	-1.9
Worcester	6.7	6630	30.2	6519	31.1	8598	48.3	7821	44.8	2495	13.8	2875	16.4
TOTAL MASS.	9.8	62,172	33.3	60,980	34.3	75,911	50.4	73,053	50.4	27,026	17.8	26,406	16.8

Table 8
Changes in Rural Younger Age Groups by County, Massachusetts, 1950-60
Changes in Rural Younger Ages

County	Total Rural Pop.	Changes in Rural Younger Ages											
		% Rural		5-9 years of age		10-14 years of age		15-19 years of age					
		1960	Change	No.	%	No.	%	No.	%	No.	%		
Barnstable	83.2	22,381	62.0	1,306	93.3	1,150	96.8	1,109	93.6	689	53.8	601	60.6
Berkshire	25.7	6,168	20.3	656	47.6	563	43.6	532	43.4	553	50.0	140	12.9
Bristol	15.8	5,411	9.4	542	18.6	599	23.1	931	41.9	966	46.7	443	22.5
Dukes	100.0	5,633	3.5	14	5.4	-11	-4.5	35	17.1	86	47.5	28	-11
Essex	9.3	-1,489	-2.7	650	26.9	657	29.7	802	40.7	805	48.7	244	15.1
Franklin	58.9	3,424	12.0	434	32.8	522	43.0	572	50.7	582	60.1	159	17.3
Hampden	13.0	7,363	15.2	1,138	51.8	971	45.9	1,192	69.1	1,050	62.4	425	29.0
Hampshire	33.4	1,880	5.8	553	37.9	505	37.9	533	45.1	644	59.8	273	27.5
Middlesex	14.1	36,907	26.7	4,334	67.3	4,011	67.2	3,273	64.6	3,332	73.2	2,161	43.2
Nantucket	21.2	172	29.5	21	110.5	21	91.3	12	66.7	21	161.5	9	47.4
Norfolk	13.6	-11,919	-14.6	414	10.6	454	12.8	357	12.2	386	14.0	-388	-14.9
Plymouth	40.3	20,381	25.6	1,620	41.0	1,648	45.1	2,105	70.6	1,958	70.5	1,148	46.2
Suffolk	0.0												
Worcester	27.7	23,898	17.3	2,632	41.6	2,555	44.3	3,048	58.6	2,750	57.7	624	11.6
TOTAL MASS.	16.4	114,773	15.7	14,386	42.2	13,801	44.0	14,542	53.8	14,242	57.5	5,955	23.8
												3,884	16.7

FIGURE 1: PERCENTAGE CHANGE 1950-1960 IN YOUNGER AGE STRUCTURE FOR TOTAL UNITED STATES, MASSACHUSETTS AND MASS. COUNTIES.

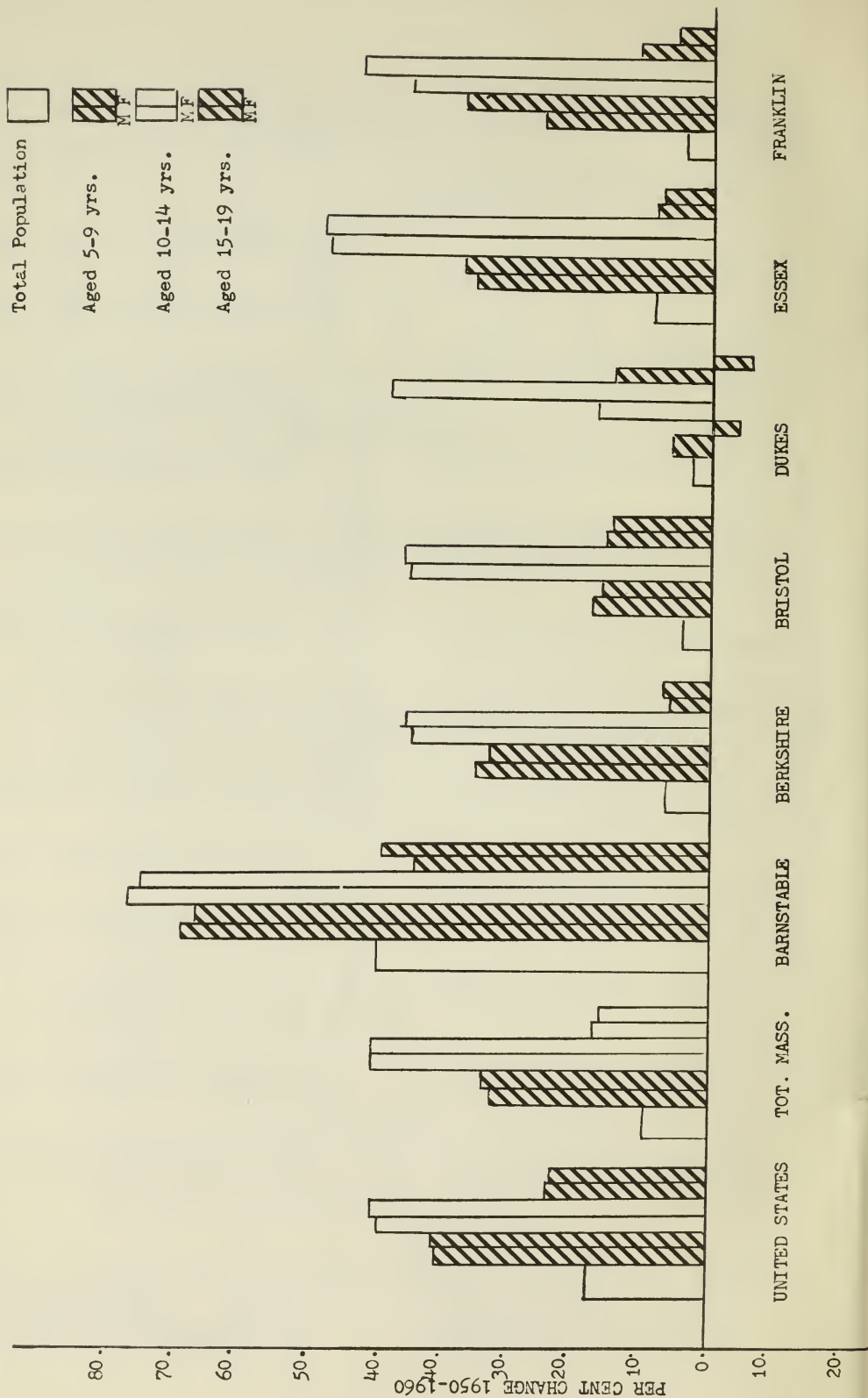
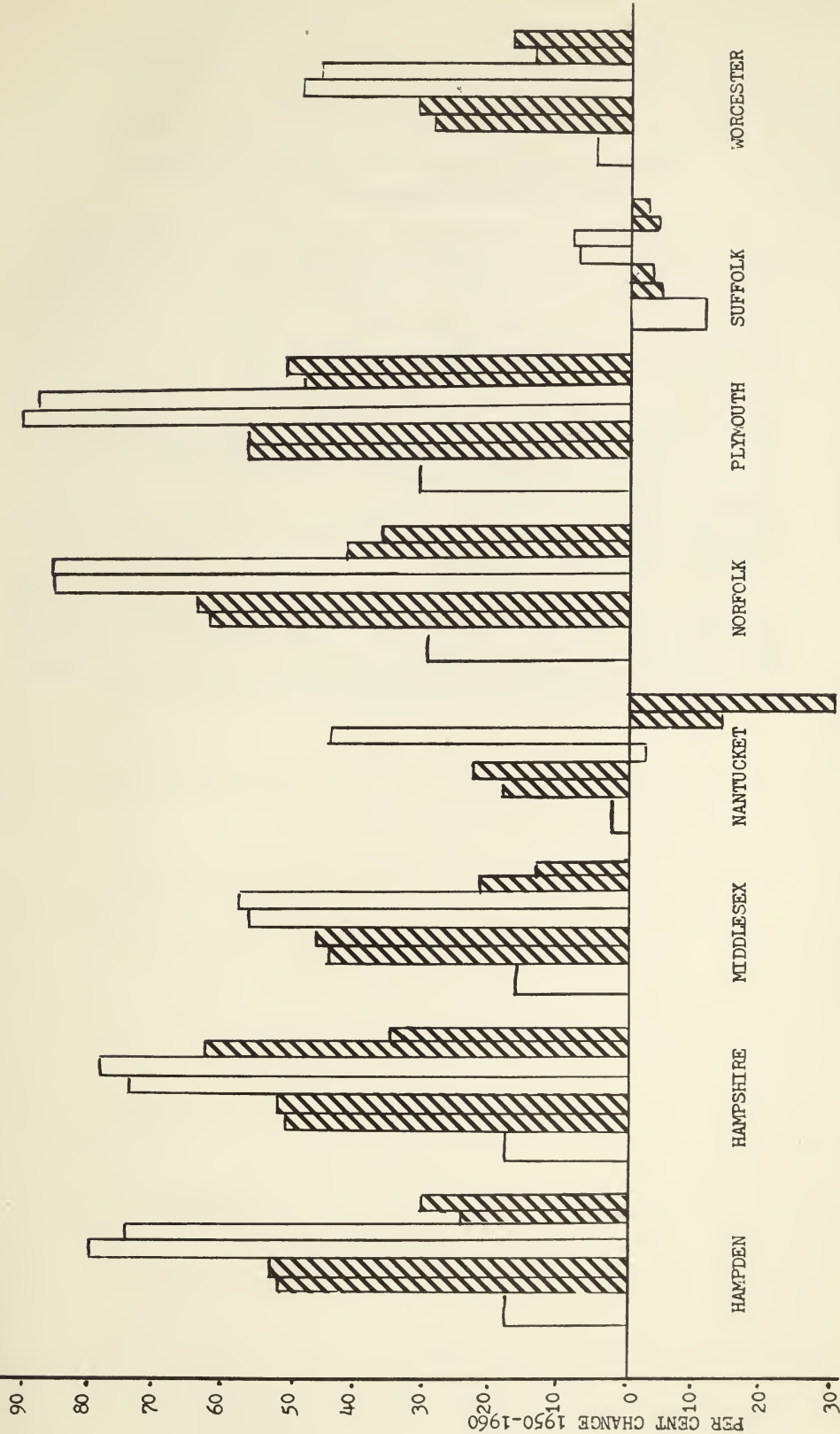


FIGURE 1 (CON'D)



III

The Younger Age Groups: A Comparison by Counties of Rural Population, Massachusetts, 1950-1960

The census defined rural population of the United States *decreased* 0.8% (424,556 persons) during the decade 1950-1960. The rural population in Massachusetts, however, *increased* at a rate higher than that of total population increase: 9.8% for total population, 15.7% for rural population. Because the category rural as defined by the census includes all population outside cities, the Massachusetts increase represents largely a growth of suburban population rather than a growth of genuine rural or agricultural population. This point can be underscored by noting that those counties showing the largest rural increases are those contiguous to the Boston area, (for example, Barnstable and Middlesex) while the lower increases were characteristic of the counties where there are proportionately greater commitments to genuine rural or agricultural activities (for example, Franklin and Hampshire).

Table 8 shows the changes in rural population by counties for 1950-60 both in absolute numbers and as percentages.

There would seem to be relatively little influence by the proportion rural in a county upon the level of increase in the younger ages. However, it is to be noted that the two counties with highest per cent total population classified as rural (Franklin and Barnstable) also tended to have the highest rates of increase in all age and sex categories of the population group 5-20 years of age.

APPENDIX

TABLE A: NUMBER OF PERSONS IN YOUNGER GROUPS BY
COUNTY, MASSACHUSETTS, 1960

TABLE B: NUMBER OF POPULATION IN YOUNGER AGE GROUPS
IN RURAL POPULATION BY COUNTY, MASSACHUSETTS,
1960

APPENDIX

Table A: Number of Persons in Younger Age Groups by County, Massachusetts, 1960
Younger Age Groups

County	Aged 5-9		Aged 10-14		Aged 15-19	
	Males Number	% *	Males Number	%	Males Number	%
Barnstable	3,409	4.9	2,840	4.0	2,291	3.3
Berkshire	7,273	5.1	6,653	4.7	4,832	3.2
Bristol	18,521	4.6	18,057	4.5	13,624	3.7
Dukes	273	4.7	240	4.1	223	2.9
Essex	27,834	5.3	25,822	4.9	17,945	3.7
Franklin	2,862	5.2	2,881	4.9	1,739	3.3
Hampden	21,832	5.1	21,146	4.6	14,282	3.3
Hampshire	4,723	4.6	4,534	4.2	4,716	3.1
Middlesex	61,389	5.0	54,271	4.4	44,710	3.6
Nantucket	144	4.0	132	3.7	106	3.4
Norfolk	27,029	5.3	23,848	4.7	17,261	3.0
Plymouth	13,004	5.2	11,979	4.8	8,318	3.3
Suffolk	32,013	4.0	29,693	3.8	28,622	3.6
Worcester	28,610	4.9	26,406	4.5	20,590	3.5
Total Mass.	248,916	4.8	226,583	4.4	178,500	3.5
Total U. S.	9,504,368	5.3	8,524,289	4.8	6,633,661	3.7

* Percentage of total population in age/sex group.

APPENDIX

Table B: Number of Population in Younger Age Groups in Rural Population
by County, Massachusetts, 1960
Younger Age Groups

County	Aged 5-9		Aged 10-14		Aged 15-19	
	Males Number	%	Males Number	%	Males Number	%
Barnstable	2,853	4.9	2,338	4.0	1,969	3.4
Berkshire	2,034	5.6	1,758	4.8	1,229	2.7
Bristol	3,456	5.5	3,151	5.0	2,416	3.1
Dukes	273	4.7	240	4.1	223	4.1
Essex	3,068	5.8	2,773	5.3	1,855	2.9
Franklin	1,757	5.5	1,700	5.3	1,077	3.3
Hampden	3,336	6.0	2,916	5.2	1,736	3.3
Hampshire	2,013	5.8	1,716	5.0	1,367	3.1
Middlesex	10,733	6.2	8,338	4.8	7,159	4.0
Nantucket	40	5.3	30	4.0	14	2.9
Norfolk	4,316	6.2	3,293	4.7	2,048	1.9
Plymouth	5,574	5.6	5,086	5.1	3,292	2.9
Suffolk						3.3
Worcester	8,963	5.5	8,247	5.1	5,423	3.4
Total Mass.	48,456	5.7	41,586	4.9	27,198	3.2
Total U. S.	3,113,861	5.8	2,946,037	5.5	2,090,567	3.9

